Media Converter

BOSCH
Invented for life

- DIP switch configuration for "Link-Fault-Pass-Through", link down alarm, speed, duplex mode
- 768K bits buffer memory
- Full wire-speed forwarding rate
- Alarms for power and port link failure by relay output
- Redundant power inputs with Terminal Block and DC Jack

The Ethernet Fibre Optics Converter is used for electric utility automation and accept 10/100 Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX. The Converter complies with the standard of IEC61850-3, IEEE1613 and EN50121-4.

Functions

Network size – length of cable

Multimode fibre (MM) 50/125 µm	0 - 2000 m, 15 dB Link Budget with 1300 nm, A = 1 dB/km, 13 dB Reserve, B = 800 MHz x km
Multimode fibre (MM) 62.5/125 µm	0 - 2000 m, 15 dB Link Budget with 1300 nm, A = 1 dB/km, 13 dB Reserve, B = 500 MHz x km
Singlemode fibre (SM) 9/125 µm	0 – 40 km, 30 dB Link Budget with 1300 nm, A = 0.4 dB/km, 14 dB Reserve, D = 3.5 ps/(nm x km)

Safety

- UL508

EMI

- FCC Part 15, Class A
  - EN61000-6-4
  - EN55022
  - EN61000-3-2
  - EN61000-3-3

EMS

- IEC61850-3 & IEEE1613: Substation & Power automation Applications
- EN50121-4: Railway Applications
- EN61000-6-2
  - EN61000-4-2 (ESD Standards)
    Contact: + / - 8KV; Criteria B
    Air: + / - 15KV; Criteria B
  - EN61000-4-3 (Radiated RFI Standards)
    35V/m, 80 to 1000MHz; 80% AM Criteria A
  - EN61000-4-4 (Burst Standards)
    Signal Ports: + / - 4KV; Criteria A
    D.C. Power Ports: + / - 4KV; Criteria A
  - EN61000-4-5 (Surge Standards)
    Signal Ports: + / - 2KV; Line-to-Line; Criteria A
    D.C. Power Ports: + / - 2KV; Line-to-earth; Criteria A
  - EN61000-4-6 (Induced RFI Standards)
    Signal Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
    D.C. Power Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
  - EN61000-4-8 (Magnetic Field Standards)
    1000A/m @ 50, 60Hz; Criteria A

Environmental Test Compliance

- IEC60068-2-6 Fc (Vibration Resistance)
  5g @ 10~150KHz, Amplitude 0.35mm (Operation/ Storage/Transport)
- IEC60068-2-27 Ea (Shock)

25g @ 11ms (Half-Sine Shock Pulse; Operation)
50g @ 11ms (Half-Sine Shock Pulse; Storage/ Transport)

- IEC60068-2-32 Ed (Free Fall)
  1M (3.281ft.)

Technical specifications

Electrical

Operating voltage	20 to 30 V DC (terminal block)
Power consumption	2.4W MAX. 0.2A@12VDC, 0.05A @ 48VDC
Overload current protection	Present
Reverse polary protection	Present

Mechanics

Material	Aluminium case, IP30
Dimensions	50 x 110 x 135 mm (1.97 x 4.33 x 5.31 inches)
Weight	0.8Kg (1.76lbs.)
Installation	DIN rail (top hat type 35mm), panel, rack mounting

Environmental conditions

Permissible operating temperature	-40°C to 75°C (-40°F to 167°F)
Permissible storage temperature	-40°C to 85°C (-40°F to 185°F)
Ambient relative humidity	5% to 95% (non-condensing)

Interface

Ethernet port	10/100BASE-TX: 1 port 100BASE-FX: 1 port
LED indicators	
• Per unit	Power status (Power 1, Power 2, Fault), link-fault-pass-through
• Per port	10/100TX: Link Activity, full-duplex/collision, speed 100FX: Link/Activity, full-duplex/collision
Relay contact	Relay contact rating with current 1A@30VDC, 0.5A@120VAC
Fibre connector type	SC

Technology

Standards	• IEEE802.3 10BASE-T • IEEE802.3u 100BASE-FX, IEEE802.3x